

ON THE OCCURRENCE OF *VERTIGO PARCEDENTATA*, AL. BRAUN,  
IN HOLOCENE DEPOSITS IN GREAT BRITAIN.

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IN 1890 Mr. T. Scott noted the occurrence in a Holocene deposit at Kirkland Leven, Scotland, of a form of *Vertigo*, which, although resembling *V. pygmaea*, yet, since it was edentulous, might prove to be a distinct species, and he suggested the provisional name of *V. concinna*.<sup>1</sup>

In 1891 this form was described and figured by the same author, the provisional name of *concinna* being again used.<sup>2</sup> In the same year Mr. T. D. A. Cockerell pointed out that there might be confusion between this species and *Pupa concinna*, Lowe, from Madeira,<sup>3</sup> which suggestion Mr. Scott, in the note immediately following, accepted, and proposed the new name of *Levenensis*.<sup>4</sup> The species was stated to be not uncommon in the Kirkland deposit. Since its discovery it has not been noted in any other locality.

Several years ago Prof. T. Rupert Jones gave one of us some material from a Holocene deposit at Stamford, and on working it over it yielded a fair number of this species. It had always appeared to us, however, that this form, though certainly distinct from all other British forms, would probably prove to be a previously described continental species, and after a careful perusal of the literature we came to the conclusion that it was probably identical with *Vertigo parcedentata*, Al. Braun. We therefore submitted examples of the Stamford shells to Dr. O. Boettger, who most kindly informed us that they agreed with the variety *Genesisii*, Gredler, of *V. parcedentata*. This species is very variable as to the number of teeth. Typical *parcedentata* possess one or two teeth (the single-toothed form being known as var. *glandicula*, Sandb.), and is very much rarer than the edentulous form var. *Genesisii*. This latter form is known in a recent state from St. Genesien, near Bozen, in the Tyrol; from Oester-goetland, Sweden (Westerlund); and Isarauswurf, near Munich.

The var. *Genesisii* has been recorded in a fossil state by Dr. Boettger from the Pleistocene of Mosbach, Kleinert, near Grosszimmern, the

<sup>1</sup> "Preliminary notes on a Post-Tertiary Fresh-water Deposit at Kirkland Leven and at Elie, Fifeshire": Proc. Royal Phys. Soc. Edin., vol. x, p. 334.

<sup>2</sup> Scottish Naturalist, 1891. T. Scott: "Some notes on the Scotch species of the Molluscan genus *Vertigo*," p. 49 and pl. i.

<sup>3</sup> Op. cit., p. 141.

<sup>4</sup> Op. cit., p. 141.

Loess of Schierstein Heidingsfeld and Regensburg, and in the Holocene of Grossen Bruchs, near Traisa (province of Starkenburg and of Zusmarshausen, near Augsburg).<sup>1</sup>

Dr. E. W. Wüst, in 1903, gave the following additional localities: Pleistocene of Wilzenburg and Osterode, Loess, in the neighbourhood of Strassburg, Roten Hause, near Eckbolsheim, and of Hurst'schen Ziegeleigrube near Achenheim<sup>2</sup>; whilst Dr. Boettger informs us that it has also been recorded from the peat of Kutzenhausen by S. Clessin and the Loess of Pelleracker Pinningen, near Basel, by Dr. A. Gutzwiller.

It will thus be seen that the names *concinna* and *Lervenensis* must be added to the already overburdened list of synonyms of *V. parcedentata*, whilst an extremely interesting continental species must now be included in our list of extinct non-marine mollusca.

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<sup>1</sup> Dr. O. Boettger, "Die Entwicklung der *Pupa*-Arten": Jahrb. d. Nassau. Ver. f. Naturk., Jahrg. xxii, 1889, pp. 308-310.

<sup>2</sup> "Pleistozäne Flussablagerungen mit *S. schumacherii* in Thüringen und in nordlichen Harz-Vorlande": Zeitschrift für Naturwissenschaften, 1903, Bd. lxxv, p. 316.